

Eligibility Criteria for Extracorporeal Cardiopulmonary Resuscitation at Auckland City Hospital: A Retrospective Cohort Study

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Abstract

Background: Extracorporeal cardiopulmonary resuscitation (ECPR) is a promising adjunct to routine advanced cardiac life support. Growing worldwide interest in ECPR-use has seen more tertiary centres offering ECPR programmes. New Zealand's nationwide extracorporeal membranous oxygenation service is provided at Auckland City Hospital (ACH). Despite the potential benefits of ECPR, it is currently only offered on an ad hoc basis. It remains unknown whether ACH would manage sufficient numbers of patients to warrant an ECPR programme.

Methods: A 12-month retrospective cohort study of the medical records of patients who were managed for cardiac arrest in the resuscitation room of the Emergency Department was conducted. Patient characteristics and clinical outcomes were analysed descriptively and audited against a unique set of criteria for a hypothetical ECPR programme.

Results: Between 1 July 2018 and 30 June 2019, 286 patients died or had a cardiac arrest for which they were managed at ACH. Sixty-five of these patients had an in-hospital cardiac arrest in the Emergency Department. Seven (10.8%) of these patients were deemed eligible for hypothetical ECPR. Only one of these seven patients survived to hospital discharge with full neurological recovery.

Conclusions: An ECPR programme at ACH using standardised and agreed criteria may benefit a generous number of patients and improve rates of survival to hospital discharge with preservation of neurological function. An ECPR guideline would help clarify for referring services cases that are appropriate for ECMO consideration, rather than discussing on an ad hoc basis.

Biography:

Dr Steve Waqanivalagi graduated Bachelor of Medicine and Bachelor of Surgery, and Bachelor of Medical Science (Honours) with First Class Honours from the University of Auckland. He is currently a doctoral candidate in Medicine and has a clinical appointment as Fellow in Emergency Medicine in the Adult Emergency Department at Auckland City Hospital.

Recent publication data:

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